

1. (Four Times Amended) A method of detecting one of electromagnetic radiation in the optical range and nuclear radiation, comprising the steps of:

exposing a microcantilever to a non-contact source of electromagnetic radiation, the microcantilever having at least one physical property affected by electromagnetic radiation;

monitoring electromagnetic radiation-induced changes in the at least one physical property, the changes cause a response

selected from the group consisting of a bending of the microcantilever, a shift in resonance frequency of the microcantilever, and a combination thereof; and

correlating changes in the at least one physical property to a measure of the electromagnetic radiation.

10. (Amended) A method according to claim <sup>25</sup>1, further comprising [placing] making the microcantilever part of [in] a capacitor having a capacitance which varies with movement of the microcantilever, and the correlating step includes correlating changes in capacitance to the presence of radiation.

Amendment Under 37 CFR §1.115  
Serial No.: 08/588,484  
May 27, 1998

Docket: ESID-1604-X

17. (Four Times Amended) An apparatus for detecting one of electromagnetic radiation in the optical range and nuclear radiation, comprising:

a radiation sensor having an element exposed to a non-contact source of electromagnetic radiation, the sensor having at least one physical property affected by the electromagnetic radiation;

DB means for monitoring electromagnetic radiation-induced changes in the at least one physical property, the changes cause a response selected from the group consisting of a bending of the microcantilever, a shift in resonance frequency of the microcantilever, and a combination thereof; and

means for correlating changes in the at least one physical property to a measure of the electromagnetic radiation.

Amendment Under 37 CFR §1.115  
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2724. (Twice Amended) An apparatus for detecting  
[electromagnetic and] nuclear radiation, comprising:

a radiation sensor having an element exposed to a source of  
radiation, the sensor having at least one physical property  
affected by radiation;

means for monitoring radiation-induced changes in the at  
least one physical property of the sensor; and

DB means for correlating changes in the at least one physical  
property to a measure of radiation; wherein

the sensor comprises a microcantilever connected to a base,  
where the microcantilever consists of a material or layered  
materials which converts energy of radiation, if present, into a  
physical change in the microcantilever; wherein

the microcantilever or layered materials on the  
microcantilever exhibits a change in elastic modulus upon  
radiation damage induced by absorption of nuclear radiation.

#### REMARKS

Reconsideration and allowance of the claims are requested.

The Examiner's comments have been carefully reviewed. Upon  
entering the Amendment, claims 1-24 are pending in the  
application. Claims 1, 10, 17 and 24 have been amended.